

SUSTAINABLE COMPETITIVE ADVANTAGE – THE KEY WEAPON TO ENHANCE THE ECONOMIC COMPETITIVENESS OF A FIRM — A STUDY OF THE AUTOMOBILE INDUSTRY

R. GOPAL

Department of Business Management, Padmashree Dr. D.Y. Patil University, Navi Mumbai, Maharashtra, India

ABSTRACT

In recent year, globalization has become a key concept / theme in every business conference. The new mantra today for success as enunciated by academicians and practitioners has been Marketing and Innovation. In other words firms must be able to utilize the twin concepts of marketing and innovations to fight competition and be successful in the market place. In other words businesses must have a definite advantage over its competitors or better still a sustainable competitive advantage.

Competitive strategy helps in establishing a profitable and a sustainable position in the market place. The key to competitive strategy is sustainable competitive advantage (SCA). These advantages stem from the various subgroups of a firm's processes, the skills and resources at its disposal, the new product development as well as its innovative strategies and finally how these advantages are implemented in the market place. In the ultimate analysis these advantages must contribute to the Top Management's Objective viz. the Return on Investment.

KEYWORDS: Top Management's Objective, Sustainable Competitive Advantage (SCA)

INTRODUCTION

Sustainable Competitive Advantage is the unique position that is not easily duplicable by the competitors. A firm possesses a sustainable competitive advantage when it has value-creating products, processes and services for their customers that cannot be duplicated or imitated by its competitors.

According to Vadim Kotelnikov, sustainable competitive advantage is the focal point of the firm's corporate strategy. It allows the maintenance and improvement of the firm's competitive position in the market. It is an advantage that enables the business to survive against its competition over a long period of time. The opportunity for the firm to sustain its competitive advantage is determined by two important capabilities, a firm must possess viz.— Distinctive capabilities and Reproducible capabilities.

Barney suggests that sustainable competitive advantage exists when the firm is implementing a value-creating strategy not simultaneously being implemented by any current or potential competitors and when these other competitors are unable to duplicate the benefits of this strategy. The sustainability of a competitive advantage depends upon the possibility of competitive duplication. Invisible assets may allow a firm to sustain a competitive advantage. When the organization achieves a higher rate of return than its competitors, it is said to have gained competitive advantage. For gaining sustainable competitive advantage, a firm has to optimally utilize its internal resources and capabilities to exploit external opportunities. At the same time, gauging the external threats is also important for the firm.

Gopal (2007) defines Sustainable Competitive Advantage “as the ability to achieve a higher return / greater success through operating processes or other competitive positioning over the competitor and which can be

sustained over a long period of time.”

In the long run, these attributes must yield a higher return or help in reducing the complexities of the operating processes and these attributes must be such that they cannot be copied for a long period of time.

In the research paper "Strategic Intent" Hamel and Prahalad (1989) stressed on the need for firms to learn how to create new advantages that will keep them one step ahead of competitors. In 1992 in their paper "The Core Competence of the Corporation", C. K. Prahalad and Gary Hamel argue that "Core Competences" are some of the most important sources of uniqueness.

Porter in 1985 discussed the basic types of competitive strategies firms can possess to achieve Sustainable Competitive Advantage. In his book titled "Competitive Advantage: Creating and Sustaining Superior Performance", Porter Introduced the "value chain" concept as the basic tool for analyzing the sources of competitive advantage.

Competitive advantage arises from the differentials among firms along any dimension of attributes and characteristics that allows one firm to better create customer value and also do something comparable better than the competitors. Meanwhile, generic sources of competitive advantage include ownership of assets or position; access to distribution and supply, as well as proficiency knowledge competence and capability-in business operations.

Gopal (2007) in his paper Innovation – The Key Strategic Weapon to increase competitiveness – a model to measure the impact of innovation on the value of the business, introduces the concept of Customer to Customer cycle to indicate the various process involved in any organization. He suggests that **innovation** in these processes could ultimately lead to sustainable competitive advantage.

Innovation generally involves two types of innovations those in the area of product development and / or related to the product and those related to process innovation. All the existing literature indicates that there is a **strong and important relationship that exists among the capability of a firm to innovate, its competitive strategy and the posture of its production resources.**

Gopal (2007) outlines, for example, the two main processes involved in the factory forward activities (i.e. the processes involved in dispatching the goods and services from the factory to sales) of a firm. These two main processes comprises of the Business Development Process and the Sales Process. Each of these processes has several sub processes and each sub process has several sub process. Each of these sub processes lends itself to innovations and such innovations can be a source for sustainable competitive advantage.

The key areas for innovative strategies are highlighted in this paper such as Manpower Adjustment which the author says is vital for any turnaround strategy, the need to identify high potential customers and provide them with innovative solutions. The author recommends the use of the "Importance – Attribute Matrix" as a powerful tool to measure the perception of the customer in order to derive the products unique selling propositions..

All these innovations in the ultimate analysis must pass the acid test of any business, which is the **RISK v/s RETURN** analysis. This Return can be measured through the Internal Rate of Return (IRR) or any profitability measurement computations while the risk can be measured through the sensitivity analysis calculations, the analysis of the business risk, technological risks etc. etc

In conclusion, the literature review indicates that the promotion of Sustainable Competitive Advantage is the key for the success of any firm. **Further the literature review also indicates that there are practically no studies which**

provide a model or a process to link the sustainable competitive to the various products and processes to innovations and finally to the ultimate measurement of performance of a firm namely the profitability of a firm.

Based on the above discussions, the study aims to identify

- Various issues involved in defining Sustainable Competitive advantage measures at the firm's level.
- Tools, which could be used to measure Sustainable Competitive Advantages of a firm
- Issues involved in implementing the components of Sustainable Competitive Advantage
- The impact of implementing Sustainable Competitive advantage measures on the firm.

The study would help practicing managers in different firms in

- Identifying areas where competitive advantage could be obtained and a probable method through which this competitive advantage could be obtained.
- Developing tools for measuring the contribution of this identified advantage and thus increase firm's wealth.
- Identifying issues which are the key challenges to implementing this advantage and finally
- Understanding the various steps / strategies that a firm could use to overcome the challenges involved in implementing this advantage.

The entire study has a more practical bias rather than just a theoretical bias and would be of immense help to the practicing manager.

Based on the above objectives, the following hypothesis was initiated:

H_{10} = There is no significant relationship between R & D expenditure (total) and sales of a firm across companies.

H_{11} = There is a significant relationship between R & D expenditure (total) and sales of a firm across companies.

H_{20} = There is no significant relationship between R & D expenditure (total) and PBDITA of a firm across companies.

H_{11} = There is a significant relationship between R & D expenditure (total) and PBDITA of a firm across companies.

H_{30} = There is no significant relationship between the R & D expenditure (Current) and sales of a firm across companies.

H_{31} = There is a significant relationship between R & D expenditure (Current) and sales of a firm across companies.

H_{40} = There is no significant relationship between R & D expenditure (Capital) and sales of a firm across companies.

H_{41} = There is a significant relationship between R & D expenditure (Capital) and sales of a firm across companies.

H_{50} = There is no significant relationship between the R & D expenditure (Current) and the operating Profit (PBDITA) of a firm across companies.

H₅₁ = There is a significant relationship between R & D expenditure (Current) and operating Profit (PBDITA) of a firm across companies.

H₆₀= There is no significant relationship between R & D expenditure (Capital) and operating Profit (PBDITA) of a firm across companies.

H₆₁ = There is a significant relationship between R & D expenditure (Capital) and operating Profit (PBDITA) of a firm across companies.

Research Methodology

This research adopted a descriptive approach, which involved using a questionnaire.

The study has been restricted to the automotive sectors in India; however the findings of this study can be extrapolated to any industry not only in India but also in the global village. Additionally the study involved a detailed discussion with the product managers, R & D managers, the Finance Managers and finally heads of the Strategic Planning Department (or department with equivalent names but similar functions).

Sampling Design

The data for this research was gathered through a mix of primary sources and secondary sources using appropriate sampling techniques. Secondary sources were employed for developing indices required to develop the empirical model. This was based on data sources obtained from the online data base like Centre for Monitoring Indian Economy, Info line etc. A sample size of 10 automobile firms was chosen for this purpose.

Data Collection

The research initially relied on primary data to be collected using a structured questionnaire. The questionnaire provided for a set of closed and open ended questions to be administered to the respondents.

The questionnaire comprised of several parts. These parts related to:

- Aspects in connection with the various activities carried on by the organizations.
- The Turnover structure and the profitability details of the organization.
- The competitive scenario and the actions taken by the firm to thwart this competition.
- The competitive advantage that the firm enjoys with respect to its competitors.
- The product innovations and the process innovations carried out by the firm in the last few years, which has resulted in it enjoying a sustainable competitive advantage or otherwise.
- The amount spent on R & D for such innovations and finally
- The impact of product and the process innovations on the profitability of the firm.

Data Findings

The discussion with the officials of the organizations did not yield any fruitful results. The study revealed that the organizations were not in favor of giving any data with respect to their products or processes other than those that were published. Additionally in the case of a few companies where the data was available, it was found that such data was unreliable and not substantiated. The published data however was in relation to the attributes of the product and more in

the nature of a sales pitch. No useful analytical data was therefore available from the primary survey for the purpose of the study and hence the primary survey with respect to collection of the above the data was abandoned.

The organizations were also not in favor of giving any data relating to the amount that was invested in R & D or the profits arising out of such investments other than that, that was available in the annual reports.

The primary survey concerned with the collection of quantitative data had then to be abandoned and the study was conducted through the use of secondary data. Qualitative data was partially obtained through the primary survey.

For the purpose of the study, recourse was then taken to the qualitative and quantitative data (including the financial data available) through the Centre for Monitoring Indian Economy (CMIE). All financial data with respect to the firms were then obtained only through the CMIE database. The data collected was for the year 2007 to 2011.

The discussions with the top and the middle management of several firms indicated that firms in the normal course would invest in product or process innovation in order to get sustainable competitive advantage and these would be then captured as R & D expenses. The R & D expenses were of two types: R & D (Current) and R & D (Capital).

The profitability of the firm could be measured through various parameters like for example, Profit before Tax (PAT), Profit before tax (PBT), Profit before interest and tax (PBIT), Profit before depreciation interest and tax (PBDITA) etc. The discussion resulted that considering a plethora of reasons, **it would be appropriate to measure profitability in terms of the Gross Operating Profit also called as PBDITA.**

The Automotive Industry comprises of automobile and auto component sectors and is one of the key drivers of the national economy as it provides large-scale employment, having a strong multiplier effect. Being one of the largest industries in India, this industry has been witnessing impressive growth during the last two decades. It has been able to restructure itself, absorb newer technology, align itself to the global developments and realize its potential. This has significantly increased automotive industry's contribution to the overall industrial growth in the country.

Automobile Industry was delicensed in July 1991 with the announcement of the New Industrial Policy. The passenger car industry was however, delicensed in 1993. No industrial licence is required for setting up of any unit for manufacture of automobiles except in some special cases. The norms for Foreign Investment and import of technology have also been progressively liberalized over the years in order to make this sector globally competitive. At present 100% Foreign Direct Investment (FDI) is permissible under the automatic route in this sector. The net effect of this liberalization and its effects has been that today the Indian Automobile Sector is a force to reckon with in the global scene.

Growth Drivers of the Industry

Detailed discussions with the knowledgeable persons in the field indicated that the following factors would be responsible for the growth of this all important sector:

- Rising industrial and agricultural output
- Rising per capita income
- Favourable demographic distribution with rising working population and middle class
- Increasing disposable incomes in rural agri-sector
- Availability of a variety of vehicle models meeting diverse needs and preferences

- Greater affordability of vehicles through easy finance schemes
- Favourable government policies

The Link between Gross Profits, Sales and the Components of R & D

The automobile sector comprises of leading automobile manufacturers like Maruti Suzuki, Mahindra and Mahindra, Hindustan Motors etc. The analysis indicated that expenses in R & D have a long term impact on the sales as well as the profitability of the firm as indicated below:

$$Y_{Sales} = 3330.99* + 18.2X^{**} \text{ RD(T)}$$

$$t=2.72 \quad 4.04P= 0.0$$

$$Y_{PBDITA} = 389.2^{**} + 1.7 X^{**} \text{ RD(T)}$$

$$t=2.713.0P= 0.0$$

$$Y_{Sales} = 3290.1^{**} + 69X \text{ RD(curr)}$$

$$t=2.752.03P= 0.0$$

$$Y_{Sales} = 3922.2^{**} + 18.3 X^{**} \text{ RD(cap)}$$

$$t=3.113.67 P= 0.0$$

$$Y_{PBDITA} = 360.5* + 7.1 X^{*} \text{ RD(Curr)}$$

$$t = 2.542.58 P= 0.0$$

$$Y_{PBDITA} = 446.8^{**} + 1.7 X^{**} \text{ RD(Cap)}$$

$$t=3.052.73 P= 0.0$$

$$Y_{PBDITA(2yr lag)} = 466.3^{**} + 3.4X^{**} \text{ RD(Cap)}$$

$$t = 3.164.01 P= 0.0$$

$$Y_{PBDITA(1yr lag)} = 463.2^{**} + 2.2 X^{**} \text{ RD(Cap)}$$

$$t = 2.993.44 P= 0.0$$

$$Y_{Sales(2yr lag)} = 4122.4^{**} + 38.3 X^{**} \text{ RD(Cap)}$$

$$t = 3.655.67 P= 0.0$$

$$Y_{Sales(1yr lag)} = 4116.2^{**} + 22.1X^{**} \text{ RD(Cap)}$$

$$t = 3.314.89 P= 0.0$$

The relationship is strong especially with a two year lag clearly indicating that any investment in R & D yields an increase in sales or profitability after a gap of around 1 or 2 years.

Summarizing the above table indicates that some of the hypothesis would be accepted while the others would be rejected. The details are given below:

Table 1

Sl. No	Description of the relationship	Null Hypothesis	Alternate Hypothesis
1	R & D (Total) and Sales	There is NO relationship between the R & D Expenditure (total) and Sales (REJECT)	There is A relationship between the R & D Expenditure (total) and Sales (ACCEPT)
2	R & D (Total) and PBDITA	There is NO relationship between the R & D Expenditure (total) and PBDITA (REJECT)	There is A relationship between the R & D Expenditure (total) and PBDITA (ACCEPT)
3	R & D (Current) and Sales, PBDITA with no lead or lag	There is NO relationship between the R & D Expenditure (Current) and Sales (REJECT)	There is A relationship between the R & D Expenditure (Current) and Sales (ACCEPT)
4	R & D (Capital) and Sales, PBDITA with no lead or lag	There is NO relationship between the R & D Expenditure (Capital) and PBDITA (REJECT)	There is A relationship between the R & D Expenditure (Capital) and PBDITA (ACCEPT)
5	R & D (Capital) and Sales, PBDITA with no lead or lag	There is NO relationship between the R & D Expenditure (Capital) and Sales (REJECT)	There is A relationship between the R & D Expenditure (Capital) and Sales(ACCEPT)
8	R & D (Capital) and Sales, with 1 or 2 year lag	There is NO relationship between the R & D Expenditure (Capital) and PBDITA (REJECT)	There is A relationship between the R & D Expenditure (Capital) and PBDITA(ACCEPT)
6	R & D (Capital) and Sales, with 1 or 2 year lag	There is NO relationship between the R & D Expenditure (Capital) and Sales with 1 year lag (REJECT)	There is A relationship between the R & D Expenditure (Capital) and Sales with 1 year lag (ACCEPT)
7	R & D (Capital) and Sales, with 1 or 2 year lag	There is NO relationship between the R & D Expenditure (Capital) and Sales with 2 year lag (REJECT)	There is A relationship between the R & D Expenditure (Capital) and Sales with 2 year lag (ACCEPT)
9	R & D (Capital) and PBDITA, with 1 or 2 year lag	There is NO relationship between the R & D Expenditure (Capital) and PBDITA with 1 year lag (REJECT)	There is A relationship between the R & D Expenditure (Capital) and PBDITA with 1 year lag (ACCEPT)
10	R & D (Capital) and PBDITA, with 1 or 2 year lag	There is NO relationship between the R & D Expenditure (Capital) and PBDITA with 2 year lag (REJECT)	There is A relationship between the R & D Expenditure (Capital) and PBDITA with 2 year lag (ACCEPT)

CONCLUSIONS

The above analysis indicates clearly that the total expenditure on R & D invariably results in an increase in sales and profits. The impact is stark in the case of R & D expenditures which are current in nature. The impact of the expenditures which are capital in nature have an impact after one or two years. Thus validating the theory that sustainable competitive advantage would result in innovations and this would result in an increase in Research and Development Expenditure which in turn would result in an increase in sales or profits.

The detailed discussions with the industry personnel indicated that firms with normal profits to begin with invest a part of the profits in the current business through investments in R & D which results in either product or process innovation. The net effect of this product or process innovation would invariably be an increase in profits (either through cost reductions or through increase in margins) and / or increase in sales. The resultant effect would always be a competitive advantage and depending on the advantage it could result in a sustainable competitive advantage.

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